M.O.S.I.S UI 2.0 Project's Objective:

1. Design a UI for the M.O.S.I.S project Raspberry Pi by November 27, 2023 to:

- Control the functions of the microscope, utilizes the onboard buttons, shows a live preview at 15 fps at a downscale resolution of 1920 X 1080
- Display temperature sensors data with an accuracy of 3 significant digits
- Display Ph sensor data with an accuracy of 2 significant digits
- Display pressure sensor data with an accuracy of 2 significant digits.
- Display dissolved oxygen sensor data with an accuracy of 2 significant digits
- Choose the configuration file for the specific study to be done
- Achieving a tenfold increase in responsiveness in comparison to the existing user interface when switching through different windows in the user interface

2. Adapt the currently existing hardware API, by November 27, 2023 to:

- Display the live feed from the cameras to the U.I
- Parse the temperature, Ph, pressure and dissolved oxygen data string from the UART port
- Run diagnostic sub-routines at application start

3. By November 27, 2023, store data and metadata in a format that a researcher can browse through in a file browser, of which include:

- Left camera media
- Right camera media
- Shot type
- Time stamp
- Temperature
- Ph
- Pressure
- Dissolved oxygen

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Client Name

11/09/2023

Date

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Client Signature